GEOGRAPHIC NEWS BULLETINS

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THE NATIONAL GEOGRAPHIC SOCIETY

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Contents for Week of February 5, 1940. Vol. XVIII. No. 29.

Photograph by Knud Sorensen

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The husky fishwives who spread their trays in the Gammel Strand fish market of København (Copenhagen) sell their fresh fish alive, to forestall questions about freshness. To be salable there, a dead fish must be dried and cured (left). Danish fishermen use the seine instead of the trawl because trawling would kill the catch and ruin the sale of herring, haddock, mackerel, flounder, and eels on the "live" market. Fishing ranks second to farming as a source of wealth in Denmark, but stands first in Norway (Bulletin No. 1).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Scandinavia: Europe's Viking Crest

AS THE United States dispatched the first U.S. naval attaché to Scandinavia this month, three Scandinavian airlines sent representatives to the United States with a proposal for a direct transatlantic air service. The news stirred old memories of Viking seafarers commuting to the New World 500 years before Columbus, and of Norsemen pushing ahead in the Ages that Europe called Dark.

The first transatlantic shipping and passenger service, a thousand years ago, was that between Norway and colonies in Greenland, under the Norse king, Harold the Fairhaired, in the early 10th century. Eric the Red in his dragon-prowed, sea-going rowboat of possibly forty oars pushed west to Vinland, which historians seek to identify on the North American mainland.

Taught World About Matches, Botany, Whaling and Dynamite

Scandinavia comprises those Three Musketeers of sub-Arctic Europe—Denmark, Norway, and Sweden. Flat green Denmark, the smallest, has used every device of socialized laws and cooperative marketing to make itself the leading bacon-, butter-, and egg-exporter of Europe. Mountainous Norway, the second largest, fiord-gashed and snow-capped, has the least productive land, and turns to the sea for its reputation as the fishing-est and shipping-est nation. Industrial Sweden, the largest, uses resources of forest and iron and inventiveness.

Scandinavia	Area (Sq. Mis.)	Comparable to	Population (1935)	Per Sq. Mi.	Independent since	Capital
Denmark.....	16,575	½ Maine	3,706,000	224	9th century	Kōbenhavn
Norway.....	124,556	New Mexico	2,884,000	23	1905	Oslo
Sweden.....	173,347	2 Utahs	6,250,000	40	1523	Stockholm

Together not twice as large as California, these countries have developed a culture bounded on the south by Hamlet, Shakespeare's "melancholy Dane"; on the east by Swedish safety matches and steam-turbines; on the Arctic north by the midnight sun of Lapland's summer and the Lofoten maelstrom about which Poe writes one of his nightmare short stories; on the west by Edvard Grieg's music. For Scandinavia has given the world such varied contributions as Hans Christian Andersen's *Fairy Tales* and Ibsen's brooding dramas, the centigrade thermometer, Greta Garbo and Queen Christina, the modern whaling industry, the discovery of oxygen, Jenny Lind, Alfred Nobel's inventions of dynamite and Nobel prizes, Linnaeus the "Father of Botany," the cream separator, the mystic Swedenborg, skiing and the telemark, *Beowulf,* and the tasty *smörgåsbord.*

Ruled over England, France, Russia, and One Another in Turn

The home of this vigorous Scandinavian culture is a long, snow-covered mountain chain, with Sweden on the east slope, Norway on the west, and flat Denmark detached at the southern end like a mounting platform. The latitudes are those of Canada's Hudson Bay region, almost uninhabited, and bleak Labrador. Sweden has numerous glaciers; among Norway's is one that could hold a whole family of Alpine glaciers on its lap—Jostedalsbre, reputedly Europe's largest.

Much of Scandinavia is under water. One estimate gives Norway 10 miles

Photograph from Dr. Hugh M. Smith

SCHOOLED BY THE FISH, NORWEGIANS EARLY LEARNED THEIR VIKING SKILLS

Rich runs of cod and herring lured the prehistoric Norwegians to leave their barren valley homes for seasonal fishing in the sheltered waters between the shore and the string, or "wall," of coastal islands. When skilled in the handling of their slender many-oared longboats, they were able to harry the other coasts of Europe on pirate raids, and cross the Atlantic to establish Europe's first colonies in the American hemisphere. The cod fisheries along the Lofoten Islands, north of Trondheim, still help to make Norway the leading fishing nation of Europe. The cod which are split open, gutted, salted, and dried on the rocks (foreground) are known to commerce as *klipfisk* (rock-dried cod). The *torfisk*, which are dried without salt, are stacked in cylindrical heaps on top of a wooden rack (middle ground) (Bulletin No. 1).

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West's "Last Stand" Expanded in Olympic National Park

REMOVED from the potential path of growing cities and towns, nearly 200,000 acres of America's fast vanishing wilderness were recently added to the sylvan stretches of Olympic National Park, in Washington State.

Set in the heart of Olympic Peninsula—which faces Canada across Juan de Fuca Strait at the far edge of Uncle Sam's Northwest—the Olympic National Park is the nation's youngest federal park. It was made a Park by Act of Congress in June, 1938, having been established in 1909 as a National Monument.

Holds Famous "Rain Forests"

The 1940 additions to the Park, put into effect by recent presidential proclamation, brought to an already extensive area of nearly 650,000 acres a spectacular woodland playground of mountains and streams, hot springs, waterfalls, rolling fields of wild flowers, and unexcelled rain forests.

Gathered into the Park along its northwest shoulder where the Bogachiel River starts out for the ocean, the rain forests have long been an outstanding feature of the Pacific Northwest. A result of heavy rainfall and favorable climatic and soil conditions, they stretch in vast stands of fir, cedar, hemlock, and spruce—growing with tropical luxuriance up near the 48th degree of latitude. A thick undergrowth of moss, vines, and ferns gives the appearance of a jungle to these towering forests, that often rise to heights of 300 feet. The average rainfall of the region is 142 inches; by contrast, on the other side of the Olympic Peninsula, it is less than 15 inches.

Other tracts of territory added clockwise around the edges of the Park, from northern Port Angeles to the stream-watered slopes of the west, include large public camp grounds and winter-sports centers, as well as additional peaks, lakes, and rapids offering new variety and beauty in a region already crowded with natural wonders.

Hot Springs as Dragons' Tears

In Olympic National Park—which now occupies 835,411 acres of an authorized maximum of 898,292 acres—there are hundreds of species of wild flowers and rushing mountain streams and lakes filled with such anglers' game as rainbow and cutthroat trout, Eastern brook trout, Beardslee trout, and the gamest of all, steelhead.

Blacktailed deer, black bear, mountain goats, and elk (illustration, next page) are among the wild animals that freely roam the Park's high meadows. Some of the elk are of the rare breed named for Theodore Roosevelt. In the craggy peaks nest many eagles and hawks.

With the recently extended acreage, Olympic Hot Springs brought 21 new springs within the limits of the Park. Indians used to explain this manifestation of nature by the legend that the hot springs were dragons' tears. According to the story, two great dragons, Elwha and Soleduck, fought a mighty battle over the boundary line which divided their respective possessions on Olympic Peninsula. The struggle, which ended in a draw, left both so weary and wounded that they hid themselves in their separate caves and wept. The hot tears of the two dragons still bubble in the valleys of the two rivers which bear the beasts' names—the Soleduck, emptying into the Pacific, and the Elwha, winding northward to Juan de Fuca Strait.

of waterfront for every square mile of inhabited land. Denmark is one-third islands. Sweden and Norway are as "tall" from south to north as the United States; the long contour gives them coastlines on four seas and the Arctic Ocean.

Scientists hold the theory that in some shaded misty valley of long dark winter, possibly Norway's Mjösa valley, ages of inbreeding produced Scandinavia's pure blond type—the yellow-haired blue-eyed Norsemen of history and today.

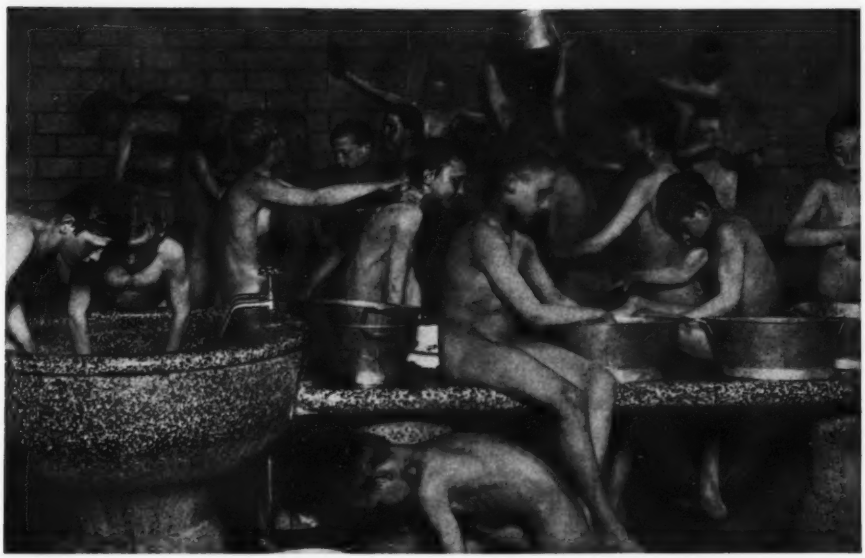
These fair-haired warriors shook Europe under such terror-striking names as Goths, Visigoths, and Ostrogoths. As Angles they pushed into Britain and made it Angle-land. As Norsemen they plundered Paris and settled Nor(th)mandy.

When Denmark claimed a third of England from Alfred the Great, she also ruled Norway and parts of Sweden. Denmark's Margaret joined all three Scandinavian countries by treaty in 1397. Norway's capital was built by a Danish king. In the 16th century, a restless Sweden fought her way free under Gustavus Vasa. Norway remained under Danish rule until the 1814 shake-up after Waterloo, then entering a reluctant union with Sweden which was dissolved in 1905.

Since then, stripped of their far-flung territory of ten centuries ago, the Scandinavian trio have practiced cooperation instead of domination. Their commerce has flourished on a diet of Danish bacon and eggs, Norwegian fish and timber, Swedish wood-pulp and manufactures. Their laws for health and unemployment insurance, child welfare, and pensions are studied by foreign nations. All three maintain state-owned railway, telephone, and telegraph systems.

Note: For additional descriptions and photographs illustrating the people, the history, and the culture of Scandinavia, see "On Danish By-Lanes," *National Geographic Magazine*, January, 1940; "Country Life in Norway," April, 1939; "Flying Around the Baltic," June, 1938; "Life in a Norway Valley," May, 1935; "Country-House Life in Sweden," July, 1934; "Royal Copenhagen, Capital of a Farming Kingdom," February, 1932; "Norway, a Land of Stern Reality," July, 1930; "Sweden, Land of White Birch and White Coal," October, 1928.

Bulletin No. 1, February 5, 1940.



CLEANLINESS IS NEXT TO THE CLASSROOM IN SWEDEN

While Wesley taught that "cleanliness is next to godliness," Swedish educators made sure it would be easily accessible. Small schools with no other equipment for bathing than tubs encourage students to wield the brush and finish off with a self-service shower (right of center). Attention to the physical side of education dates back to 1813, when Henrik Ling founded the far-famed Ling system of physical training, or Swedish drill. Sweden's teachers, 70 per cent of whom are women, must be furnished with quarters and fuel, or the cash equivalent, by the community, in addition to salary.

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Black Sea Busy While War Flares on Other Waters

IMAGINARY naval battles took place in the Black Sea recently, where part of the Soviet Union's fleet staged maneuvers. But there were no war losses in this southern sea, whose waters lave the shores of both Europe and Asia. In striking contrast with the daily casualty list of ships torpedoed or blown up by mines off northwestern European coasts, vessels under numerous flags are carrying on an unmolested coastal trade in this eastern body of water.

The Black Sea provides an outlet for four nations—Soviet Russia, Turkey, Romania, and Bulgaria.

Soviet Union's Coastline Longest

Occupying more than twice as much shoreline as Romania and Bulgaria together, the U.S.S.R. has a total Black Sea coast of well over a thousand miles. Turkey ranks next, with about 800 miles.

The sea's area of about 164,000 square miles is roughly equal to that of the Baltic. Yet it is almost landlocked, for its only outlet leads through slender waterways that narrow to seven-tenths of a mile at the Dardanelles and one-half mile at the Bosporus.

To reach the Mediterranean, Black Sea shipping must pass through these constricted Turkish-held straits, with the Sea of Marmora between; then through the Aegean Sea separating Greece and Turkey.

Called "Black" Because Dark with Storms

It was because of the shelter afforded by the rugged coasts and numerous islands of the water corridors leading to the Black Sea that this part of the world was infested by pirates at various times from the days of the Greeks, deep into the modern era. From Constantinople, now Istanbul, during the 16th century, was operated one of the world's largest and most powerful pirate fleets.

Despite geographic and piratical hazards, however, the Black Sea long has been active in world trade. Jason and his Argonauts sailed its southeastern reaches in search of the Golden Fleece.

Its present name is sometimes attributed to the Turks, who called the sea "Black" because of the perilous storms and blinding fogs that frequently plague navigation in its waters.

Busy Ports Dot Its Shores

Into the Black Sea flow some of the most important rivers of Europe and Asia—the Dnepr (Dnieper), the Bug, and the Dnestr (Dniester). From the Soviet Union's eastern Black Sea shores come the Kuban and the Rion, while from the northeast flows the storied Don, which empties first into the adjoining Sea of Azov. Turkey contributes the Kizilirmak (its longest river) and the Sakarya; Bulgaria offers small streams, such as the Kamchia; while the great Danube meanders across most of Europe before losing itself in the Black Sea off the eastern shore of Romania.

Where rivers and rails meet the sea, many ports have grown up, including Russia's Odessa, Nikolaev, and Rostov; Romania's Constanta; Bulgaria's Burgas and Varna; Turkey's ancient Samsun (illustration, next page) and the storied eastern port of Trabzon (Trebizond).

Outward bound through Black Sea ports pours a continuous stream of the world's vital commodities, such as wheat, oil and lumber, plus traditional specialties

Queen of Olympic Park is glacier-crowned Mount Olympus, its 8,000-foot height unconquered by man until the middle 1800's. The Olympic Mountains, of which Mount Olympus is but one of a series of rugged, chaotic peaks, were not known to white men till 1774, when a Spanish sea captain reported the sighting of their jagged heads from his ship in the Pacific. Later, an Englishman, John Mears, gave the peak its present name of Mount Olympus, in ancient Greece the traditional home of the gods.

Rugged, rustic Olympic Peninsula, of which the National Park occupies the central portion, still holds remote unexplored areas. Within the last decade, one newly discovered mountain was named by Boy Scout explorers for the late President Coolidge, "because of its strong silent stillness." From the skyscrapers of Washington's metropolis, Seattle, may be seen the cloud-nudging peaks of the Olympic wilderness which has been called Uncle Sam's "last frontier."

On the other hand, a modernizing influence has come in recent years to this part of the country in the Olympic Loop Highway, a wide smooth band of civilization which roughly encircles the Peninsula.

Note: See also "Washington, The Evergreen State," *National Geographic Magazine*, February, 1933; and "The Land of the Best," April, 1916.

Bulletin No. 2, February 5, 1940.

FOR VISITORS IT MEANS PLAY; FOR INHABITANTS, A MATTER OF LIFE AND DEATH

The Olympic National Park attracts vacationists bent on camping or fishing in a wilderness playground, but the wildlife in the Park's forests seek protection from the threat of extinction. Among the larger forms of game taking refuge here are deer, the wild goat, the bear, and the elk. The elk in the photograph have taken fright when surprised at a waterhole in a clearing, stampeding into the luxuriant forest.

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1939 Discoveries in Physics Help Radio, Health, Aviation, and Industry

EXACTLY how fast is light?
What is smaller than an atom?
Can radio be freed of static?

The atom-smashing scientists of 1939 split more atoms than ever before, and "picked up" the pieces to study. In the 19th century, the atom was considered the smallest particle of matter that could exist. But the 20th century has broken the atom into constituent parts, so that science can describe the smaller particles, or "sub-atomic particles," which whirl in complex revolving systems to make up the atom as conceived today.

Science Sees Midget Family in Sub-Atomic Particles

The sub-atomic particle family has been portrayed as consisting of the relatively large proton, with a positive electric charge; the smaller electron, with a negative electric charge; the neutron, of a mass comparable to the proton's, but with neither positive nor negative charge; and the medium-sized mesotron. In addition to giving a clearer picture of the mesotron, 1939 revealed two new members of the atom particle family, which have been admitted on probation, as they are still considered only hypothetical—the netretto and the neutrino.

With a negative electric charge and a mass halfway between that of an electron and a proton, the mesotron is the "halfway-tron" or "intermediate particle." Few first babies have had more names suggested than the mesotron, which has been variously known as an X-particle, dynatron, penetron, barytron, heavy electron, meson, yukawa, and yukon.

Facts Already Known About Elusive Mesotron

The particle was first suggested about five years ago by Prof. Hideki Yukawa, Osaka University, Japan; confirmation of its existence came in 1937.

In 1939, Dr. A. H. Compton, University of Chicago, who had found the mesotron present in cosmic rays, stated that mesotrons are infrequent in the earth's atmosphere up to an altitude of 14,000 feet, but from about 25,000 feet to the top of the atmosphere they are very common.

Prof. P. M. S. Blackett, who has been conducting researches at Manchester University, England, reported that the mean "life" or duration of the mesotron at rest is 25 ten-millionths of a second. Working with the Italian scientist Dr. Bruno Rossi, he found also that mesotrons are radioactive.

New Measurement Shows Light Slower

The speed of light was measured by Dr. W. C. Anderson, Harvard University, in experiments which gave what is considered the most accurate estimate yet obtained of light rays' velocity—186,264 miles per second, as contrasted with the earlier measurement of 186,271 miles, or seven miles faster.

Remote as these experiments seem from human needs, the bridge between laboratory experiment and practical application is a short one. The University of California 225-ton atom-smashing machine, or cyclotron, for example, is now being used for the experimental treatment of cancer. Dr. T. C. Poulter, Armour Institute of Technology, reported that he had achieved a pressure of a million and

of tobacco, attar of roses, caviar, and rugs. In exchange are unloaded incoming manufactured products; cotton, sugar, luxury goods.

Through the centuries, Black Sea commerce has reflected the tensions and changes which shifting political and economic history has brought about in southeast Europe. During the World War, when this sea and its strategic approaches were the scene of various engagements, bombardments, and sieges, traffic with the outside world fell off almost entirely. Merchant tonnage through the Bosporus dropped from fourteen millions in 1913 to less than two and a half millions in 1920. Although it has since touched a peak above its pre-war levels, there has been a decline to little more than thirteen million tons in 1938.

Note: For additional material about the regions surrounding the Black Sea, consult "The Transformation of Turkey," *National Geographic Magazine*, January, 1939; "The Spell of Romania," April, 1934; "Bulgaria, Farm Land Without a Farm House," August, 1932; "East of Constantinople," May, 1923; and "The Gates to the Black Sea," May, 1915.

Bulletin No. 3, February 5, 1940.

Photograph by Maynard Owen Williams

NORTHERN SEAS BRING HOME THE BACON FOR EUROPE, BUT THE BLACK SEA SERVES THE BREAKFAST EGGS

A city which the Greeks founded more than 2,500 years ago is now Samsun, Turkey's leading Black Sea port. With a lively commerce in tobacco and licorice root, Samsun also participates in the egg trade of the Black Sea ports, shipping the fragile products as far as England. In coffin-sized crates of thin boards, fuzzy with packing material protruding from the cracks, eggs are loaded on large lighters with uptilted bows and sterns, and ferried out to ships anchored a quarter-mile offshore in Samsun's 13-mile-wide bay. Until 1937, Spain received the largest quantity of Turkish eggs; more recently Italy has been a leading consumer.

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Apartments Grow with Census Figures

WHEN Uncle Sam counts heads in the 1940 census, he will count houses, too. A separate confidential set of 37 questions on housing will be asked under each roof, to ascertain what advantages or disadvantages the community gives its residents within their homes. One aspect of community development which the census will measure is the increasing trend toward apartment house dwelling.

In the past eighteen years, for every 100 one-family dwellings erected in the larger cities of the United States, 87 families have been provided for in apartments. These figures cover 257 of the largest cities of the country, containing more than a third of the total population.

Apartment Dwelling Not New Idea, but Old as Babylon

The 1930 census showed less than three per cent of the population of the whole United States in apartment houses. Of the urban population alone, fewer than 5 per cent were apartment dwellers. In this respect the United States is behind some European centers. In Köbenhavn (Copenhagen), Denmark's capital, 90 per cent of its 666,000 people live in apartments.

Babylon has been suggested as the home of the first apartment house, or tenement. Rome, in the time of Augustus, is on record as having had but 1,780 one-family dwellings as against 44,000 apartments. Apartment houses had gradually risen to such heights that Augustus limited their height to 70 feet. Later, under Trajan, the limit was reduced to 60 feet. Modern Rome experiments in new versions of the same multiple dwellings which were built there under the Caesars (illustration, next page).

In ancient Athens many apartment houses were tenanted by the poor, and by those who, possessing no civic rights, could not acquire land.

Ancient Apartments in Land of the Pyramids

Alexandria, cosmopolitan and cultural center of Egypt, had many of its 500,000 residents in apartments in the 2nd century A.D., and apartment houses were probably of much earlier date there. The ancient apartments in Medenine, Tunisia, were windowless rooms accessible only by rude outside stairs reaching four and five stories.

Seventy-five years ago Berlin led in apartment homes. The German capital's example was followed by Wien (Vienna), Budapest, Praha (Prague), Hamburg, Paris, Stockholm and Oslo (then known as Kristiania).

In England at that time, "flats" were not so popular. Today, London's ultra-modern apartment houses are replacing many old five- and six-story town houses of the nobility, especially in the vicinity of Kensington Gardens.

Early Indian Apartments in Southwest U. S.

Tokyo built its first American-style apartment house less than fifteen years ago. China, while crowded, for the most part has clung to individual dwellings.

In the United States, the cliff dwellings of the Southwest were the first apartment buildings. The pueblos, some of which are still occupied today, belong to the second chapter of American apartment history. More closely approaching the modern apartment house were the great masonry structures such as were found at Pueblo Bonito in Chaco Canyon, New Mexico. Centuries ago as many as 1,200 persons lived in the Pueblo Bonito structures.

About ninety years ago the Pontalba Mansions became the first apartments

a half pounds per square inch by a technique which can be used commercially. Great pressures are expected to replace heat in killing bacteria in the manufacture of serums which in turn will aid in fighting disease.

Radio To Guard Planes from Crashing into Mountains

Radio was carried a long way forward by the invention of the "Klystron," a new type of radio which will produce wave lengths of 10 centimeters in contrast with the relatively long waves, measured in meters, used in commercial transmission.

Developed by scientists at Stanford University, the new device may be used on airplanes as an "absolute altimeter," indicating to a pilot the height of the plane above the ground rather than merely the height above sea level. Pilots above mountainous regions will be warned if they skim too close to a looming peak, invisible in night or storm.

A "frequency modulated" system of transmission and reception in the first high-powered, static-less radio station was built at Alpine, New Jersey, by Major E. H. Armstrong, Columbia University. Suitable only for short or high-frequency waves, the system is expected to make it possible to specialize in ultra-high frequency waves, and thus avoid the danger of crowding the longer wave bands now generally used in broadcasting.

One feature of the "frequency modulated" system is that three or more kinds of signals can be sent over the same waves at the same time—a procedure comparable to the simultaneous sending of numerous telegraph and telephone messages over the same wire. Six stations of the Yankee Network are now using Major Armstrong's system.

Iron Motion Picture "Films" More Durable

Heretofore television has been practicable only if the audience has been within a forty- or fifty-mile radius; but, in experiments during the spring of 1939, actors in a play on a stage in London, England, were televised to Riverhead, New York, where motion pictures were made of the actors as they appeared on the television receiving screen. Although the pictures were not clear, the experiments indicated that long-range television may be feasible. The test was made possible with present equipment only because of electrical conditions in the upper atmosphere produced by a period of abundant sunspots.

Motion picture "film" of metal instead of cellulose made its appearance when scientists of the German Institute of Technical Research, Berlin, developed motion pictures on "films" made either of aluminum plated iron bands or of aluminum alloy. Light does not shine through the films; the pictures are thrown on the screen by reflection. The films were reported highly durable and non-inflammable, and the aluminum alloy was lighter in weight than the usual celluloid. The films can be used on regular celluloid movie cameras and projected with only a slight change in the shutter of the standard machine.

Safety Glass Resists Steel

The "Voder," a machine which can reproduce the human voice, was developed by the Bell Telephone Laboratories. Made with apparatus used in the telephone service and operated by a keyboard and pedal, the machine can duplicate the voices of men, women, and children.

A "surface indicator" was invented by J. A. Sams, General Electric Works Laboratory. The instrument can measure the smoothness of metal or painted surfaces within 1/1,000,000 of an inch, and reveal the varying thickness of a fingerprint on smooth glass.

Many householders living next to vacant lots will be interested in the safety glass developed after six years of research sponsored jointly by five companies. The new glass can withstand the impact of a nine-ounce steel ball dropped on it from 28 feet above.

occupied by the aristocracy of New Orleans. In New York City the famous Spanish Flats were erected in 1882, at 59th Street and Seventh Avenue, where they remained until about twelve years ago.

Note: Additional illustrations showing varied apartment house architecture are found in "Puerto Rico: Watchdog of the Caribbean," *National Geographic Magazine,* December, 1939; "Buenos Aires: Queen of the River of Silver," November, 1939; "Rio Panorama," September, 1939; "Change Comes to Bible Lands," December, 1938; "Changing Berlin," February, 1937; "Louisiana, Land of Perpetual Romance," April, 1930; and "Everyday Life in Pueblo Bonito," September, 1925.

Bulletin No. 5, February 5, 1940.

Photograph by John Patric

APARTMENT CIVILIZATION AND THE PASTORAL LIFE ARE NOT FAR APART IN ROME

Apartments got a good start in ancient Athens, where many inhabitants crowded into the communal dwellings because they were not able or not permitted to own land for a house. On the back streets of the "grandeur that was Rome" under the Caesars, the bulk of the population lived in tenements whose height had to be restricted by city safety regulations. In the "Golden Age" of Augustus, there were 25 times more apartments than private homes. The shepherd, timeless figure that preceded the city dweller in history, grazes his flock beside two stages in modern Rome's apartment housing development—the earlier style on the right, with wooden shutters and laundry at the window, and the ultramodern architecture on the left, with columnless corner balconies and collapsible steel shutters.

NOTICE: A number of subscriptions to the GEOGRAPHIC NEWS BULLETINS will expire with the next issue, that of February 12. Those subscribers whose year of BULLETINS service will end at that time receive a Renewal Blank with that issue, but no other notice of expiration. They will receive no further issues of the GEOGRAPHIC NEWS BULLETINS after February 12 until renewal has been requested. It is urged that they return the Renewal Blank as soon as they receive it, to prevent a lapse in receipt of the weekly BULLETINS.